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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/624,765
Filing Date	July 25, 2000
Inventor(s)	Walid AHMED et al.
Group Art Unit	2665
Examiner Name	Daniel J. RYMAN
Attorney Docket Number	29250-000484/US

ENCLOSURES (check all that apply)

☐ Fee Transmittal Form

☐ Fee Attached

☐ Amendment

☐ After Final

☐ Affidavits/declaration(s)

☐ Extension of Time Request

☐ Express Abandonment Request

☐ Information Disclosure Statement

☐ Certified Copy of Priority Document(s)

☐ Response to Missing Parts/ Incomplete Application

☐ Response to Missing Parts under 37 CFR 1.52 or 1.53

☐ Assignment Papers (for an Application)

☐ Letter to the Official Draftsperson and _____ Sheets of Formal Drawing(s)

☐ Licensing-related Papers

☐ Petition

☐ Petition to Convert to a Provisional Application

☐ Power of Attorney, Revocation Change of Correspondence Address

☐ Terminal Disclaimer

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☐ After Allowance Communication to Group

☐ LETTER SUBMITTING APPEAL BRIEF AND APPEAL BRIEF (w/clean version of pending claims)

☒ Appeal Communication to Group (Notice of Appeal, Brief, Reply Brief)

☐ Proprietary Information

☐ Status Letter

☐ Other Enclosure(s) (please identify below):

Remarks

Appeal Brief (13 pgs)

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name

Harness, Dickey & Pierce, P.L.C.

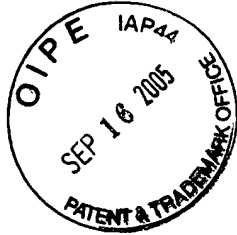
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Signature

Date

September 16, 2005



PATENT
Atty. Docket No.: 29250-000484/US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 09/624,765
Filing Date: July 25, 2000
Applicant: Walid AHMED et al..
Group Art Unit: 2665
Examiner: Ryman, Daniel J.
Title: A METHOD OF PROCESSING SOFT HANDOFF
INFORMATION AT A BASE STATION
Conf No: 7384

APPEAL BRIEF

U.S. Patent and Trademark Office
Customer Window Mail Stop Appeal Brief-Patents
Randolph Building
401 Dulany Street
Alexandria, VA 22313-1450

Date: September 16, 2005

Dear Sir:

Appellants submit herewith their Brief on Appeal as required by 37 C.F.R. 41.37.



Application Serial No. 09/624,765

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BRIEF ON BEHALF OF APPELLANTS

In support of the Notice of Appeal filed July 18, 2005, appealing the Examiner's final rejection mailed March 18, 2005 of each of pending claims 1-13 of the present application which appear in the attached claims appendix, Appellants hereby provide the following remarks.

(1) **REAL PARTY IN INTEREST:**

The real party in interest is Lucent Technologies, Inc, as evidenced by the assignment recorded at reel 011600, frame 0309.

(2) **RELATED APPEALS AND INTERFERENCES:**

No related appeals or interferences are known.

(3) **STATUS OF THE CLAIMS:**

Pending claims 1-13 are the appealed claims. Claims 1-4, 12 and 13 stand finally rejected under 35 U.S.C. § 102(a) as being anticipated by Chheda et al. (U.S. Patent No. 6,038,448), and claims 5-11 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Chheda et al.

(4) **STATUS OF ANY AMENDMENT FILED SUBSEQUENT TO FINAL REJECTION:**

No amendments have been filed subsequent to the March 18, 2005 Final Office Action.

(5) **SUMMARY OF CLAIMED SUBJECT MATTER:**

CDMA standards such as IS-95A and IS-95B, specify soft handoff processing at a mobile station. The soft handoff processing at the mobile station may involve making measurements and precatory determinations as to handoff, but a base station serving the communication needs of the mobile station makes the final decision on handoff. Furthermore, the methodology employed by the base station is not specified in the

standards. As a result, a demand exists for base station soft handoff processing methodologies that reduce the percentage of time the mobile station is in handoff without degrading system performance (e.g., reducing system capacity or costing more network resources).

In order to support soft handoff functionality, mobile stations may implement a system for managing pilot signals or pilots transmitted by base stations. One features of the mobile station's approach to this management may be pilot signals detectable by the mobile station. The pilot signals may be partitioned into four similar, mutually exclusive sets known as the Active Set, the Candidate Set, the Neighbor Set and the Remaining Set.¹

An exemplary embodiment of the present invention addresses the above issues by providing a method of processing soft handoff information at a base station by placing a more stringent condition for another base station to participate in a call even as the number of base stations participating in a call increases.² In other words, when deciding whether a candidate base station should participate in the call, the base station with primary responsibility for handling the communication needs of the mobile station may apply a set of rules that require more stringent conditions be met to add a base station to an active list of base stations involved in the call when the active list includes a first number of base stations as compared to when the active list includes a second number of base stations, wherein the first number may be greater than the second number.³

In accordance with an exemplary embodiment, the base station may decide to have the mobile station add a candidate base station to the Active Set based on the following add conditions:

1. If the Active Set is of size one (i.e., the call is in simplex), add the candidate pilot if its strength exceeds T_DROP.

¹ Appellants' specification, page 3, lines 11-17.

² Appellants' specification, page 2, lines 7-11.

³ Appellants' specification, page 2, lines 12-19.

2. If the Active Set is of size two (i.e., the call is in duplex), add the candidate pilot if it satisfies one of the following three conditions:

- (i) The candidate pilot strength exceeds DAT (IS-95B)/T_ADD (IS-95A)
- (ii) The candidate pilot strength is T_COMP higher than the weakest pilot in the Active Set and above T_DROP.
- (iii) The candidate pilot strength is larger than that for the strongest pilot in the Active Set and above T_DROP.

3. If the Active Set size is more than two (i.e., triplex or higher, but not full), add the candidate pilot if one of the following conditions is satisfied:

- (i) The candidate pilot strength is T_COMP above the weakest pilot in the Active Set and also exceeds DAT (IS-95B)/T_ADD (IS-95A).
- (ii) The candidate pilot strength is larger than that for the strongest pilot in the Active Set and above T_DROP.

4. If the Active Set is full, a candidate pilot is swapped according to the following swap conditions:

- (i) The candidate pilot strength is T_COMP above the weakest pilot in the Active Set, it exceeds DAT (IS-95B)/T_ADD (IS-95A).
- (ii) The candidate pilot strength is larger than that for the strongest pilot in the Active Set and above T_DROP.⁴

Accordingly, as seen from the above add conditions, the processing is less aggressive in adding for Active Set sizes greater than one.

⁴ Appellants' specification, page 8, line 23 – page 9, line 22.

(6) GROUND OF REJECTION TO BE REVIEWED ON APPEAL:

a) Claims 1-4, 12 and 13 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Chheda et al. (U.S. Patent No. 6,038,448).

b) Claims 5-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chheda et al.

(7) ARGUMENT:

a. Claims 1-4, 12 and 13 are not anticipated by Chheda

Appellants respectfully submit that Chheda fails to disclose a method of processing soft handoff information at a base station, comprising, at least:

receiving, at the base station, soft handoff information of a mobile station, the soft handoff information indicating at least a number of base stations in an active list of the mobile station, the active list being a list of base stations involved in a call of the mobile station;

as recited in claim 1.

Instead, Chheda discloses that a mobile unit evaluates the relative strengths of received pilot signals and requests a connection to a base station based upon the evaluation.⁵ The mobile unit may also evaluate the relative strengths of received pilot signals and request a release from a connection to a base station based upon the evaluation.⁶ In other words, Chheda discloses that the mobile unit receives and evaluates the soft handoff information rather than the base station processing and evaluating the information.

Further, Appellants respectfully submit that Chheda fails to disclose, at least:

applying a rules set to the soft handoff information to determine changes in the active list, the rules set requiring more stringent conditions be met to add a base station to the active list when the active list includes a first number of base stations as compared to when the active list includes a second number of base stations, the first number being greater than the second number;

⁵ See Chheda, col. 3, lines 44-46.

⁶ See Chheda, col. 3, lines 49-52.

as recited in claim 1.

Chheda discloses determining if the number of elements in the set Z, N_z (where Z represents the set of dropped mobile units removed from the mobile station), of pilot signal strength is greater than, or equal to two at Step 908 then the absolute value of the difference in magnitude between the two strongest pilot signals is compared to threshold D2 (Step 916, lines 34-42).⁷ D2 represents a threshold difference to be used between the strongest and next strongest pilot signal. If the magnitude of difference is not less than or equal to the threshold D2, then a determination is made as to whether the number of members of the set Z, N_z is greater than or equal to three (Step 917, lines 48-50). If so, it is determined whether the difference in pilot signal strength between signal P1 and P3 is less than or equal to a D3 threshold (Step 918, lines 53-56). Chheda thus uses differences in pilot signal strength to set a threshold. Chheda neither discloses nor suggests “applying a rules set to the soft handoff information to determine changes in the active list, the rules set requiring more stringent conditions be met to add a base station to the active list when the active list includes a first number of base stations as compared to when the active list includes a second number of base stations, the first number being greater than the second number”, as recited in claim 1.

Accordingly, Appellants submit that Chheda fails to disclose each and every feature as recited in independent claim 1. Because Chheda fails to disclose each and every feature, it cannot provide a basis for a rejection under 35 U.S.C. §102.

Claims 2-4, 12 and 13, which depend upon claim 1, are also patentable for the reasons stated above with respect to claim 1, as well as on their own merits.

Withdrawal and allowance of the application are respectfully requested.

b. Claims 5-11 are not rendered obvious over Chheda

Appellants submit that Chheda fails to disclose or suggest:

applying step moves a potential base station from the potentials list to the active list when the active list contains two or more base stations and the potential base station has a signal

⁷ See Chheda, Fig. 9 and col. 15, lines 31-61.

strength greater than a second threshold, the second threshold being greater than the first threshold,

as recited in claim 5.

However, the Examiner alleges that Chheda teaches the above features. Specifically, the Examiner alleges that:

[i]t would have been obvious to one of ordinary skill in the art at the time of the invention to move a potential base station from the potential list to the active list when the active list contains two or more base stations and the potential base station has a signal strength greater than a second threshold, the second threshold being greater than the first threshold (T-ADD) in order to have additional criteria with which to judge the potential base station.⁸

Appellants submit that the mere fact that the reference of Chheda can be modified as suggest by the Examiner is not sufficient by itself to establish a *prima facie* case for obviousness. The Examiner's motivation is not particularly clear, rather, it is a broad conclusory statement about the teachings of the reference, and is not evidence. In fact, as admitted by the Examiner⁹, Chheda discloses using 'relative' signal strengths (which may require greater processing capabilities and power) rather than absolute signal strengths when having the network determine whether a potential base station should be added to the active set¹⁰. Thus, the Examiner has failed to provide a *prima facie* case for obviousness, and thus the rejection should be withdrawn.

Appellants direct the Examiner's attention to two cases decided by the Court of Appeals for the Federal Circuit (CAFC), In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed.Cir. 1999) and In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed.Cir. 2000). Both of these cases set forth very rigorous requirements for establishing a prima facie case of obviousness under 35 U.S.C. §103(a). To establish obviousness based on a combination of elements disclosed in the prior art, there must be some motivation, suggestion, or teaching of the desirability

⁸ March 18, 2005 Final Office Action, page 5, para. 13, lines 10-15.

⁹ March 18, 2005 Final Office Action, page 5, para. 13, lines 5-10.

¹⁰ See Chheda, col. 14, lines 3-61.

of making the specific combination that was made by the Applicant. The motivation suggestion or teaching may come explicitly from one of the following:

- (a) the statements in the prior art (patents themselves)
- (b) the knowledge of one of ordinary skill art, or in some cases,
- (c) the nature of the problem to be solved.

See Dembiczak 50 USPQ at 1614 (Fed.Cir. 1999).

Accordingly, the Examiner has not adequately supported the selection and modification of Chheda to render obvious that which Appellants have described. The Examiner's conclusory statement "in order to have additional criteria with which to judge the potential base station" does not adequately address the issue of motivation to modify. This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this modification, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983). The Examiner must explain the reasoning behind his findings of motivation. Simply stating that the motivation for modifying Chheda "in order to have additional criteria with which to judge the potential base station" is an insufficient explanation for the alleged modification.

Accordingly, claims 5-11 are separately patentable for at least the reasons set forth above.¹¹

(8) CONCLUSION

For all the reasons set forth above, the present invention as recited in Appellants' pending claims 1-13 are not anticipated, nor rendered obvious to one skilled in the art as asserted by the Examiner. Accordingly, it is respectfully submitted that the claimed invention should properly be patentable over the cited art. It is therefore respectfully requested that this Appeal be granted by the panel and that the Examiner be reversed.

¹¹ Claims 5-11 are also allowable for any of the above reasons in section a) by virtue of their dependency from claim 1.

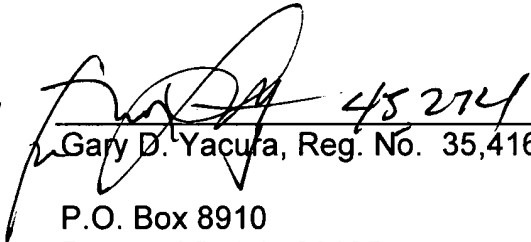
In the event that any matters remain at issue in the application, the Examiner is invited to contact the undersigned at (703) 668-8000 in the Northern Virginia area, for the purpose of a telephonic interview.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By

 45,214

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GDY/MJL/DJC

Attached: (9) Appendix: Pending claims of record

(9) CLAIMS APPENDIX:

1. A method of processing soft handoff information at a base station, comprising:

receiving, at the base station, soft handoff information of a mobile station, the soft handoff information indicating at least a number of base stations in an active list of the mobile station, the active list being a list of base stations involved in a call of the mobile station;

applying a rules set to the soft handoff information to determine changes in the active list, the rules set requiring more stringent conditions be met to add a base station to the active list when the active list includes a first number of base stations as compared to when the active list includes a second number of base stations, the first number being greater than the second number; and

sending determination results to the mobile station.

2. The method of claim 1, wherein the applying step applies the rules set to base stations in a potentials list, the potentials list being a list of base stations which are potential base stations for the active list.

3. The method of claim 2, wherein the potentials list is the candidate list in IS-95 standards.

4. The method of claim 1, wherein the applying step moves a potential base station from the potentials list to the active list when the active list contains one base station and the potential base station has a signal strength greater than a first threshold.

5. The method of claim 4, wherein the applying step moves a potential base station from the potentials list to the active list when the active list contains two or more base stations and the potential base station has a signal strength greater than a second threshold, the second threshold being greater than the first threshold.

6. The method of claim 5, wherein the applying step moves a potential base station from the potentials list to the active list when the active list contains three or more base stations, the potential base station has a signal strength greater than the second threshold, and the signal strength of the potential base station is a third threshold greater than a signal strength of a base station in the active list.

7. The method of claim 5, wherein the signal strength of the base station in the active list is the weakest signal strength of base stations in the active list.

8. The method of claim 4, wherein the applying step moves a potential base station from the potentials list to the active list when the active list contains two base stations, the potential base station has a signal strength greater than the first threshold, and the signal strength of the potential base station is a second threshold greater than a signal strength of a base station in the active list.

9. The method of claim 8, wherein the signal strength of the base station in the active list is the weakest signal strength of base stations in the active list.

10. The method of claim 4, wherein the applying step moves a potential base station from the potentials list to the active list when the active list contains two or more base stations, the potential base station has a signal strength greater than the first threshold, and the signal strength of the potential base station is greater than a signal strength of a base station in the active list.

11. The method of claim 10, wherein the signal strength of the base station in the active list is the strongest signal strength of base stations in the active list.

12. The method of claim 1, wherein the first number is two or more, and the second number is 1.

13. The method of claim 1, wherein the first number is three or more, and the second number is 1.